

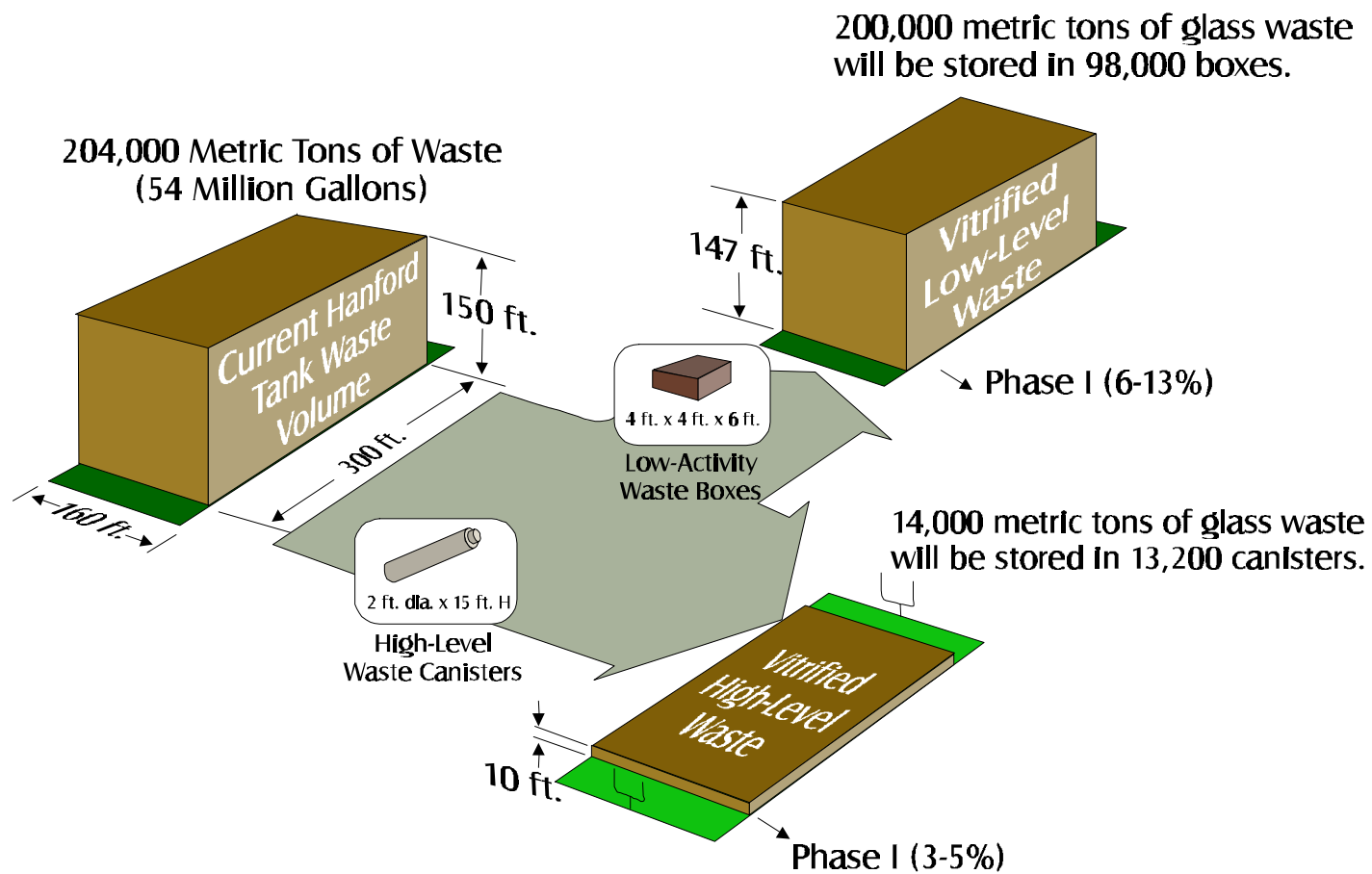
Tank Waste Remediation System

Chapter 6



Retrieval, Treatment, and Disposal of Tank Waste

Estimated Hanford Tank Waste Disposal Volumes

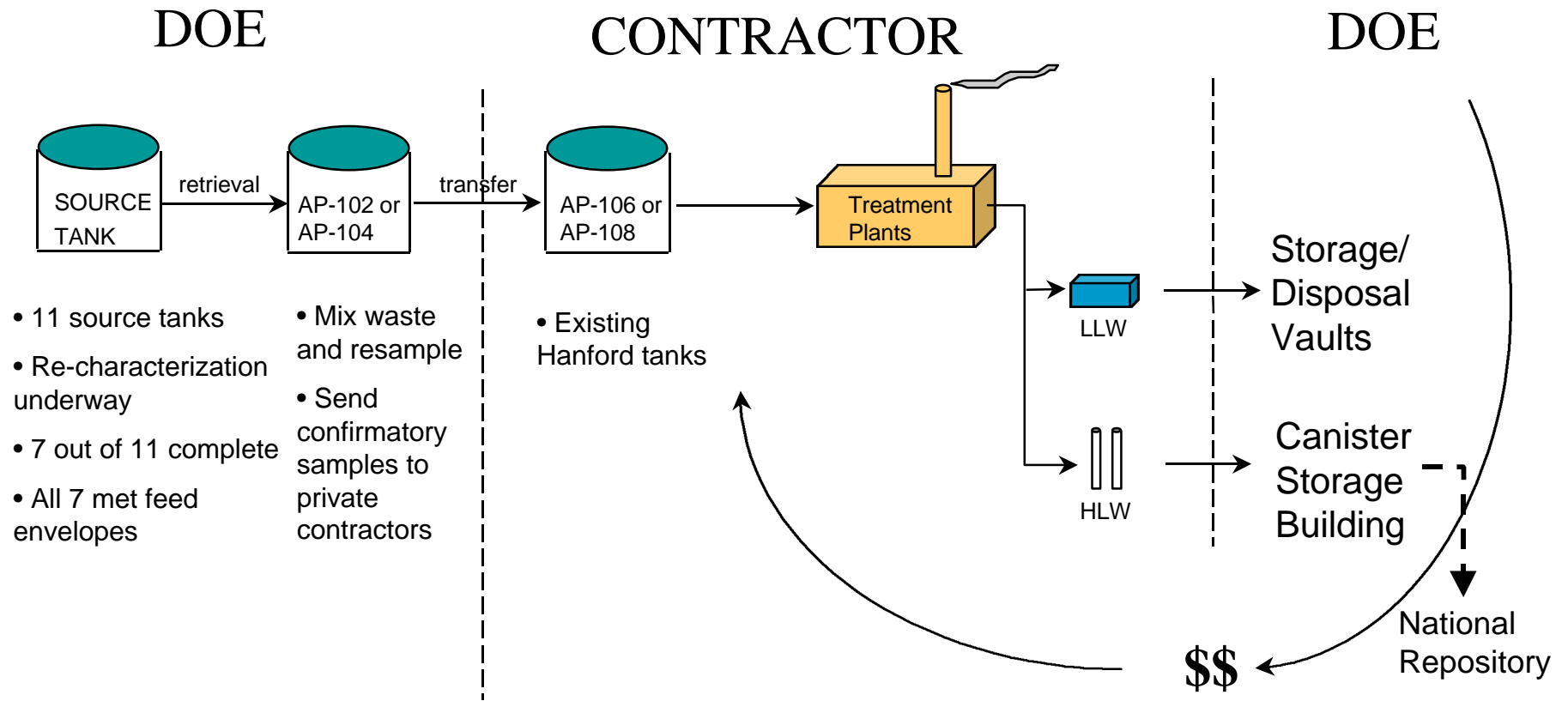


TWRS Treatment Concept

- Two-Phased Approach
 - Privately owned and operated plants with a fixed-price contract
- Phase I - Demonstration Phase
 - Treat 6-13 percent of total tank waste
 - 15-25 percent of all tank radionuclides removed
 - Contractor proposals currently under evaluation
- Phase II - Production Scale
 - Treat remainder of the waste
 - Dispose of cesium and strontium capsules (planning basis)

Treatment - Who does what?

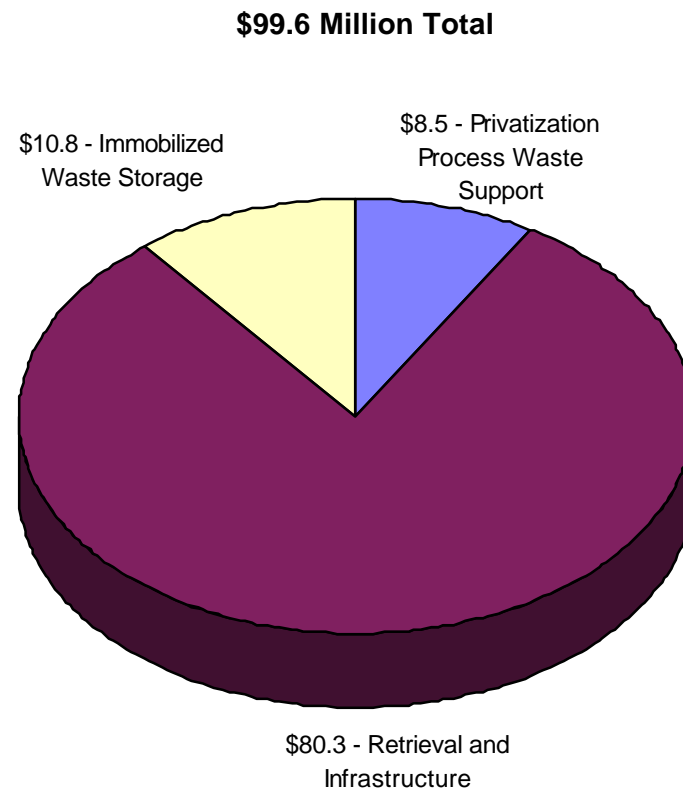
A typical Phase I batch...



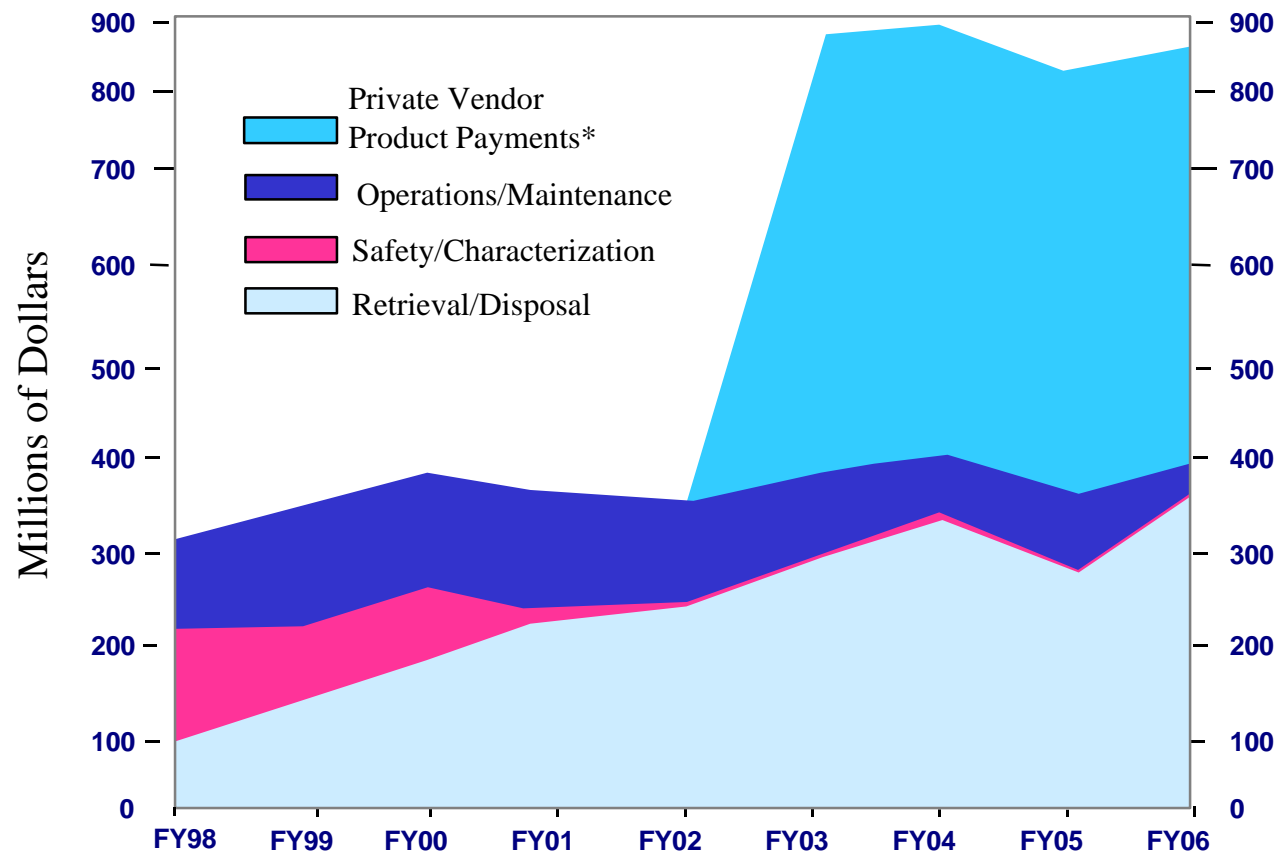
Benefits of This Type of Contracting

- Profit and a fixed-price contract are strong incentives for vendors to perform; competition provides the best value
- Privatization will bring competency, innovation, new or improved technology methods, accountability, and efficiency of private vendor
- Many of the technical and performance risks of tank cleanup would be shifted to the privatization contractors
- DOE does not pay for plants that don't produce

FY 1998 Retrieval/Disposal Budget



Treatment and Immobilization Budget: FY 1998 Through Phase I



*Set aside funds totalling \$1.45 billion accumulated in FY 1997-2002 are not included on this chart. If satisfactory HLW and LLW are received, a total of \$290M/yr will be paid to the private contractors for five years, beginning in 2003. This payment pays off the cost of the processing plants.

Planned Activities During Phase I

- 6-13% total waste will be treated
- All six double-shell flammable gas tanks will be processed
 - AN-103, AN-104, AN-105, AW-101, SY-101, and SY-103
- 15-25 percent of all radionuclides will be removed from the tanks
- The two highest activity (cesium) tanks will be processed
 - AZ-101 and AZ-102
- The two tanks with the most complex waste (high soluble strontium-90 and transuranic) will be processed
 - AN-102 and AN-107

Authorization to Proceed Path Forward

- Final proposals received from private contractors on January 26, 1998
 - Contract negotiations in Spring 1998
- Secretary's decision will be documented in the report submitted to Congress
 - Congress has 30 days to review the report
- If DOE has not authorized contractor(s) to proceed by May 25, 1998, the contract expires
 - contract extensions are being negotiated
- Decision must be made prior to July 31, 1998 TPA Milestone

Privatization Fallback Options

- There are no clear-cut alternatives
 - A number of variables will be reviewed to determine a preferred contractual alternative
- Contingent strategies that could be used or modified for use include:
 - Variation of the PHMC approach
 - Management and operations type of contract
 - Contractor-owned, contractor-operated contract
- Technical personnel and other expertise, either from onsite or rehired from the private contractors

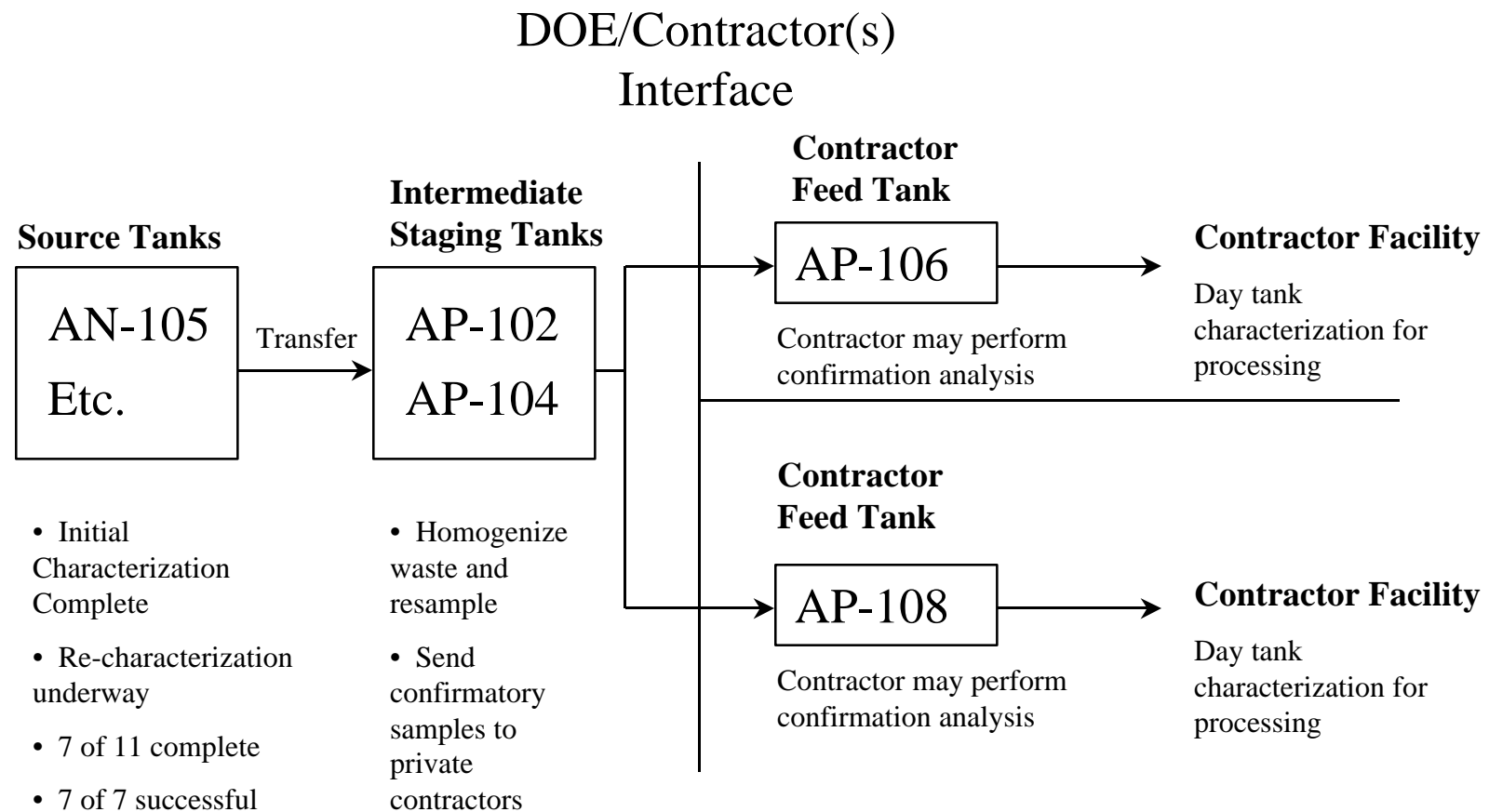
Feed Characterization

- TWRS can deliver well-defined waste that meets specifications
- Strategy for waste specifications:
 - Specify compositional “envelopes” rather than individual waste streams
 - Define maximum chemical and radionuclide concentrations
 - Provide contractor with information necessary for design
 - Based upon characterization with historical modeling
 - Continue to characterize waste and provide samples

Feed Characterization (cont'd)

- All static double-shell tank waste is expected to be within specifications, providing six to 12 years of feed
- Since the envelopes were created, seven Phase I feed tanks have been sampled and **re-sampled** - all met requirements
- If waste is not within specifications it can either be:
 - Processed at higher cost (to be negotiated)
 - Blended with other wastes
 - Withheld until Phase II
 - Adjusted with non-radioactive materials

Feed Characterization (cont'd)



Application of Privatization Lessons Learned

- Based on past DOE privatization experience and the privatization record of other government agencies, Hanford has incorporated an array of lessons learned into the tank waste privatization initiative to ensure its success. These lessons learned include:
 - Carefully define the contractors regulatory, environmental and permitting responsibilities
 - Establish interim milestones for early detection of performance issues
 - Minimize up-front payments - pay for performance/products
 - Incorporate regulatory oversight into the contract
 - Incorporate relevant portions of the successful bidder's proposal into the contract
 - Evaluate the proposals based on experience of the corporation and project management team, risks to the government, oversight to be performed by the corporation, project controls, baseline and change control processes, and progress reporting process

Application of Privatization Lessons Learned (cont'd)

- Predefine expectations and the scope of the work in detail
- Ensure DOE has the right project team to manage the project
- Use ranges for waste characterization and quantity rather than specific values
- Establish a fund to pay for facility decontamination and decommissioning
- Address workforce transition in the award and/or contracting process
- Use DOE direct contracting rather than contracting through an M&O/M&I

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